



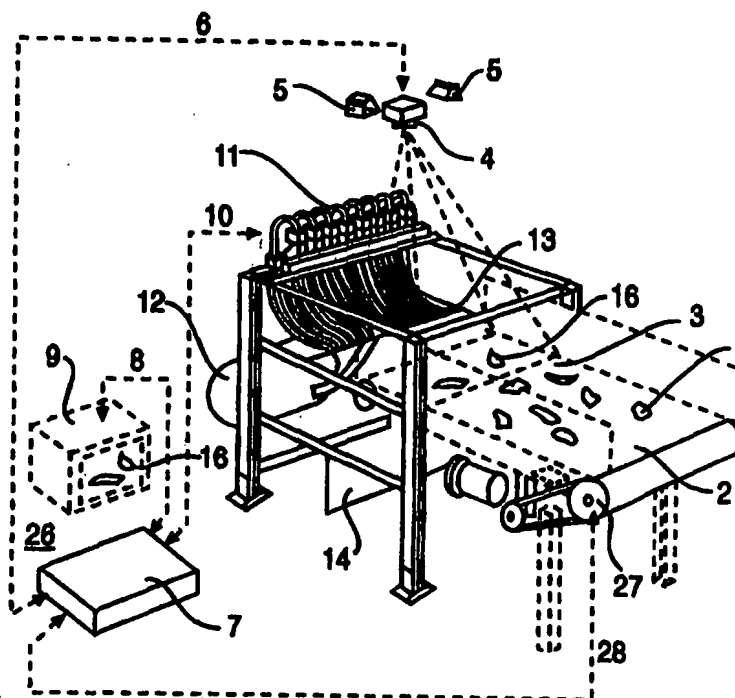
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(21) International Application Number: PCT/US97/19680 (22) International Filing Date: 3 November 1997 (03.11.97) (30) Priority Data: 60/030,183 4 November 1996 (04.11.96) US (71) Applicant (for all designated States except US): NATIONAL RECOVERY TECHNOLOGIES, INC. [US/US]; 566 Mainstream Drive, Nashville, TN 37228-1223 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): ROOS, Charles, E. [US/US]; 2507 Ridgewood Drive, Nashville, TN 37215 (US). SOMMER, Edward, J., Jr. [US/US]; 5329 General Forrest Court, Nashville, TN 37215 (US). PARRISH, Robert, H. [US/US]; 8029 Settlers Road, Nashville, TN 37221 (US). RUSSELL, James, R. [US/US]; 312 Appomattox Drive, Brentwood, TN 37027 (US). (74) Agents: LAW, Glenn et al.; Foley & Lardner, Suite 500, 3000 K Street, N.W., Washington, DC 20007-5109 (US).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (OH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).  Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.	

(54) Title: TELEOPERATED ROBOTIC SORTING SYSTEM

## (57) Abstract

A method and apparatus are disclosed for classifying materials (16) utilizing a computerized touch sensitive screen (9) or other computerized pointing device for operator identification and electronic marking of spatial coordinates of materials (16) to be extracted. An operator positioned at a computerized touch sensitive screen (9) views electronic images of the mixture of materials (16) to be sorted as they are conveyed past a sensor array (4) which transmits sequences of images of the mixture, either directly or through a computer to the touch sensitive display screen (9). The operator manually "touches" objects displayed on the screen (9) to be extracted from the mixture thereby registering the spatial coordinates of the objects within the computer. The computer then tracks the registered objects as they are conveyed and directs automated devices including mechanical means such as air jets (15), robotic arms (18), or other mechanical diverters to extract the registered objects.



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